

B E E S A N D W A S P S

"If it stings, we don't call it a bee, we call it a wasp". This was the answer given me by a Brazilian friend, when I expressed surprise at the idea of bees that do not sting; and while not strictly accurate, it represents an interesting point of view. An exception to this rule is our common Italian bee, which has been introduced into Brazil, and is treated there in about the same way that it is treated in any other country. Contrary to my friend's dictum, the Italian bee is called a bee, though I once heard a beekeeper say, after being stung several times, "O maribondo perde para ela" (These are worse than wasps).

My friend was right, however. Most of the native bees are stingless, or nearly so. By far the most popular bee in north Brazil is called the uruçu. It is similar to the Italian bee in general appearance, though slightly smaller, but its habits are quite different. It has a predilection for a hollow tree, and people usually manage to find a section of the trunk of a hollow tree to serve as a hive. A tree not more than twelve inches in diameter is preferred, though sometimes one sees a hive larger than that. The section is three to four feet in length, and is hung in a horizontal position, usually being suspended by wires from the rafters, under the eaves of the house, or on the porch, where the hive is protected from the weather, and easy of access. It is suspended in order to protect it from the ants, which would otherwise invade and destroy it. The ends are closed with pieces of wood cut to the approximate size and shape of the hollow, and sealed with clay, which hardens almost into cement. *side of the log, about the middle* A gimlet hole is bored in the center, and this one hole, just large enough for one bee at a time, is the only entrance. As the colony is quite numerous, (though not more than half the size of a colony of Italian bees) this would seem to present a traffic problem, but the bees seem to control it pretty well. One bee always stays in the opening, but moves quickly to allow the passage of outgoing or incoming bees.

One of my schoolboys brought me a hive of uruçu bees as a present, from his home in the country; and when the time came to take out the honey (That is usually done only once a year, preferably in October) he helped me do it. I doubt if I should ever have

managed it alone, the first time.

The first thing to be done is to get the end out. The makers of the hive have provided for that in some measure by cutting a notch about four inches wide and an inch deep in the end of the log, and leaving a tongue on the end piece which passes through the notch and extends out about an inch, giving something to hammer on. Even so it is no easy matter, for besides the clay applied on the outside, the bees have sealed it very effectually on the inside. When one begins to hammer on this piece, the bees come buzzing out of the hive, flying in people's faces, getting in their hair, and behaving in every way as bees do that intend to sting -- but not stinging. When one gets in your hair you disentangle it gently with your fingers, and release it. If one bee is crushed, the others become more excited, and get in the way of the operation more than ever, I am told. When the end is removed, there is a hard wall of propolis, or some similar substance, which must be cut through with a knife until the hollow is reached. And as likely as not when you get to the hollow you find you have opened the wrong end, and have to start over; for the bees have the brood chamber in one end, and store the honey in the other.

When the honey is found, it bears no resemblance to the honey to which we are accustomed. The wax is dark brown and opaque, softer in texture than that of Italian bees; and instead of the familiar honeycomb we find the honey stored in hollow globes of wax, varying in size from the size of a ping pong ball to almost as large as a tennis ball. Sometimes one of these may be removed whole, but generally it is necessary to break them. Therefore the next step is to clean away as thoroughly as possible all dust and particles of clay or propolis. Then the hive is tilted, by placing some object between the hive and the suspension wire at the "other" end, and when all is ready you reach your arm inside and ruthlessly break all these globes of honey, allowing the clear honey to flow out into a vessel held to receive it. The honey is slightly less viscid than that of Italian bees, and has a slight greenish color. It is very good, and is highly esteemed by the Brazilians, though foreigners sometimes consider it to have an exotic flavor that is slightly disagreeable.

I thought it sufficiently remarkable that there should be bees without stings, but what was my astonishment to discover that there are wasps that make honey. I believe there are several varieties of wasps that do this, but one in particular, a medium sized black wasp, is noted for this. I can not remember the name of the wasp, but a wasp's nest of any type is called an enxá, (x being pronounced like sh) and the nest of this wasp is called enxá verdadeiro, or genuine wasp's nest.

I say wasp, but perhaps we should refer to it as a hornet. In my boyhood we classified those that made enclosed nests as hornets, and those that left the nests without an outside wall as wasps. By that definition it is a hornet, for it makes an enclosed nest, which often becomes as large as a football, or larger; but the wasp is slender, and while apt to sting is by no means such a formidable creature as our North American white faced hornet. When the country people find an enxá verdadeiro they leave it alone if small, until it has attained full size, and until their experience tells them that it is full of honey. Then someone goes at night and carefully removes the nest from its place, without disturbing the wasps, and takes it into the house, where it is left for some days in a darkened room. All the wasps leave, making their exit through the cracks, and then the honey may be secured without difficulty. At least, that is the way one of my workmen told it to me, but I never saw it done. The combs are made of a paper-like substance, as in other wasps' nests, and these may be chewed up, or the honey extracted by compression. I have tried it, and while not equal to honey made by bees, it is real honey, and edible. Schoolboys are very fond of it, and often tear down the nests to obtain it, and are frequently stung, sometimes badly. The same workman that described the method of securing the honey also told me that foxes have a method of luring the wasps away from the nest, and then getting the honey without getting stung, but I regret that I cannot remember the foxes' technique.

But not only do wasps make honey in Brazil -- so do mosquitoes! That statement may be a bit misleading, for the word "mosquito", like many others found both in English and Portuguese, has not the same meaning in the two languages. What we call a mosquito is called in Pernambuco a murisoca, or farther south a pernilongo. Whereas a mosquito is any small fly or gnat. And there is a small bee, somewhat like our

sweatbees, which is known as a mosquito, and while often found wild is also kept in hives. I once had a carpenter working for me, and as logs are often sawed by hand into boards in that country, I had a large log of amarelo wood from which some chairs were to be made. The carpenter discovered that the log had a hollow in the center, and that there was a nest of mosquitos in it. He promised to save them for me when he cut up the log, and made me a hive for them, a box about two feet long and five inches square, prepared with removable ends and an opening in the side, after the manner of the uruçu hives. Then when the log was opened he transferred what he could of the nest to this new hive, and after leaving it for a few days in the same place I took it and hung it under the eaves of my garage. For a few days I noticed the little bees going in and out, and then I quit seeing them, and for months I saw no sign of life, and supposed they had abandoned the hive, or died. Then one day I saw a bee going in, and then began to see more of them, and soon there was a swarm of them going in and out all the time. Shortly before I left Brazil I opened the hive (these also are stingless) to see if there was any honey. I found plenty of comb, but was unable to discover any honey, though there may have been some underneath. I hesitated to tear away the upper combs to see.

The Brazilians are firm believers in the medicinal properties of honey, especially that of the uruçu; but the honey of the mosquito is particularly sought after, and due to the fact that it is generally obtained in small quantities it is carefully kept for use as medicine. It is said to be good for the relief of various ailments, especially earache.

Lizards are abundant in Brazil, and are great enemies of the bees, seating themselves on the hive near the opening, and devouring the bees as they come in. Its stomach appears to be proof against the stings. If no precaution is taken they will weaken a colony of bees greatly. The hives of the uruçu bees are often protected by placing a little cylinder of tin, cut from an empty tin can, around the opening where the bees go in and out, which serves to keep their landing place out of reach of the lizard. The hives of Italian bees are often placed on benches whose legs are protected with a flange of tin to prevent the lizards' reaching the hives.

Brazilian bumblebees are like our own except larger, and differ also in being solid black, not having the yellow bands that make our North American bumblebees so attractive in appearance. A Brazilian bumblebee is almost two inches in length, and has a large and powerful sting. We used to see them constantly about the flowers, but I never came across a nest of them. Like our own, they are inoffensive if not disturbed.

Most of our wasps, red, brown or striped, that are common in the United States are common also in Brazil, though I never encountered yellow-jackets there. There is an annoying little striped wasp, not over half an inch in length, which builds an enclosed nest, becoming sometimes nearly as large as a grapefruit. The only thing to be classed with our white-faced hornets is a large black hornet found in the sertão, very ferocious, and which, the Brazilians aver, will follow a person sometimes as much as two miles. This is probably an exaggeration. The only time I met up with these, on a hunting trip in 1941, we shook them off after about two hundred yards. The dogs were stung, but my companion and I escaped.

There is one kind that builds a large flat nest, somewhat resembling in shape the leather hats worn by cowboys, and called for that reason maribondo de chapéu (hat wasp). These are quite different in appearance from the other wasps, the head and thorax being light brown, the wings very long, and the tail long, slender and blunt pointed, being a bright lemon yellow in color, and armed with a painful and poisonous sting. A nest of these, viewed in the daytime, presents no sign of activity, the wasps being all in repose on the nest. If stirred up, they fly aimlessly about, making no effort to attack the person who disturbed them, though if one chance to light on him it will invariably sting. The Brazilians say that they are blind, and in reality they are blind in daylight, being night fliers. Visit one of these nests at night with a flashlight, and you will see the wasps busily coming and going, as other wasps do in daylight. Occasionally one flies into a house at night, attracted by the lights, screens being very little used in North Brazil. One night my wife was rudely awakened by something stinging her on the neck. In the act of waking she felt her hand touch some sort of

insect, which was knocked away into the darkness. We turned on the lights and looked for it, fearing that it might be a scorpion, which sometimes get into beds. A scorpion's sting on the head or neck is often dangerous, occasionally fatal. However, as the only stinging bug we could find in the room was one of these night flying wasps, we concluded that it was the culprit. The sting occasioned a good deal of swelling and pain, but no other bad effects.

There is a small black bee, about the size of a house fly, which builds, usually in a tree top, a large black nest, like a hornets' nest except that the walls are made of a crude, wax-like substance. It is called in Pernambuco aripua, which must be a local name, as I fail to find the word either in Figueiredo's dictionary or in the "Pequeno Dicionário Brasileiro". This bee is destructive to fruit trees, especially orange trees, attacking the buds, and is therefore marked for destruction by the farmers. Boys willingly cooperate in this crusade, attacking the bees with fire, and knocking down their nests, because they make a crude sort of honey, dear to the hearts of boys. The bees retaliate after the manner of their kind; and while the sting of one of these little bees is insignificant, a large number can make things extremely unpleasant for the attacker.

Greatest of the wasp tribe is the large ground wasp, three or four inches in length, called cavalo do cão, or devil's horse. (While cão strictly means "dog", o cão is a popular euphemism for "O Diabo", the Devil.) This is the wasp that seeks out the great tarantula as our common mason wasps hunt spiders, and after a furious battle stings it into insensibility and places it in her burrow to serve as food for her larvae. These wasps are often seen flying about, usually near the ground, and are left strictly alone; for while inoffensive if not disturbed, they do not hesitate to use their terrible sting if necessity arise.